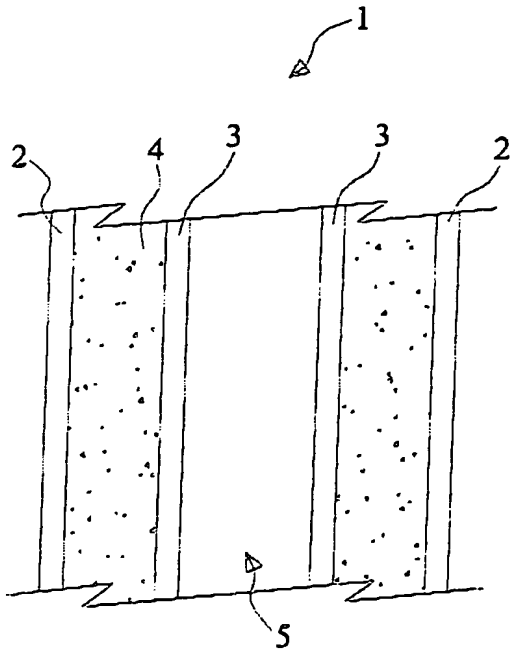
1
2
4
3
3
2
5

Fig. 1

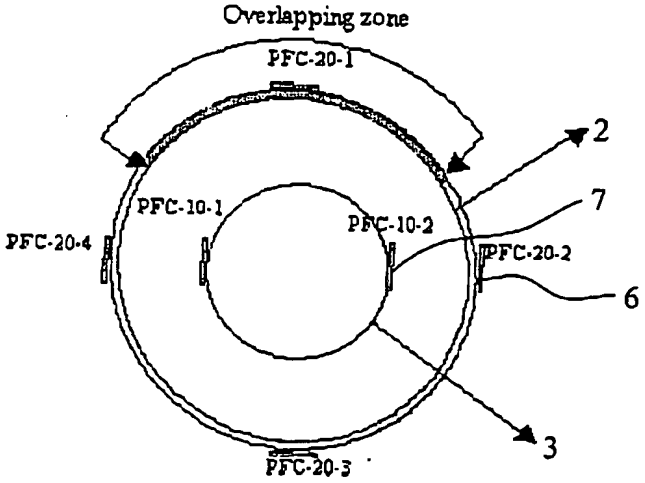
Overlapping zone
PFC-20-1
2
7
PFC-10-1
PFC-10-2
PFC-20-4
PFC-20-2
6
3
PFC-20-3

Fig. 2

| Specimen | Number of FRP layers | Inner steel tube |
|---|---|---|
| DS11 | One | D/t=76/3.22 |
| DS12 | One | D/t=76/3.22 |
| DS21 | Two | D/t=76/3.22 |
| DS22 | Two | D/t=76/3.22 |
| DS31 | Three | D/t=76/3.22 |
| DS32 | Three | D/t=76/3.22 |

Fig. 3

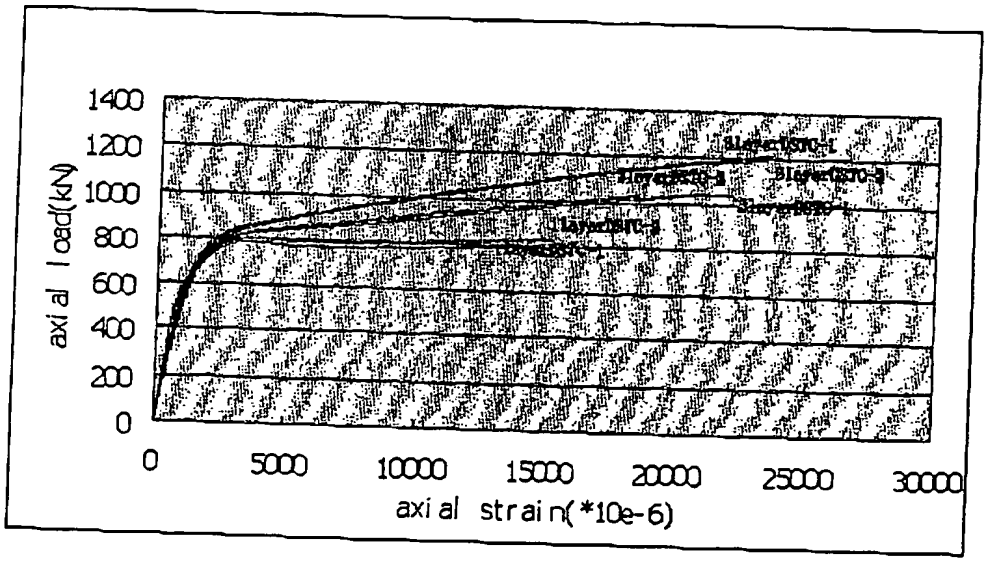


Fig. 4

| Label | Pco (kN) | Ps (kN) | Pc (kN) | Ave Pc (kN) | fcc (MPa) | fcc/fco | $\varepsilon_a$ ($\times 10^{-6}$) | Ave $\varepsilon_a$ ($\times 10^{-6}$) | $\varepsilon_a / \varepsilon_{co}$ |
|---|---|---|---|---|---|---|---|---|---|
| DS11 | 543.58 | 282.6 | 793.75 | 811.51 | 38.86 | 0.98 | 14208 | 14542 | 5.53 |
| DS12 | | | 829.27 | | | | 14875 | | |
| DS21 | | | 1044.15 | 1034.47 | 55.24 | 1.39 | 22000 | 20204 | 7.69 |
| DS22 | | | 1024.79 | | | | 18417 | | |
| DS31 | | | 1214.07 | 1207.99 | 68.00 | 1.71 | 23666 | 23541 | 8.96 |
| DS32 | | | 1201.91 | | | | 23416 | | |

fco — unconfined concrete strength;

Pco --- calculated ultimate load of unconfined concrete

Ps --- calculated ultimate load of inner steel tube

Pc --- ultimate load obtained in the test

fcc --- calculated confined concrete strength

$\varepsilon_a$ --- ultimate axial strain of DSTCs

$\varepsilon_{co}$ --- strain at peak stress of unconfined concrete

Fig. 5